

SYNOPSIS OF *OMMATIUS* WIEDEMANN  
(DIPTERA: ASILIDAE) FROM HISPANIOLA

A. G. SCARBROUGH

Department of Biological Sciences, Towson State University,  
Baltimore, Maryland 21204

*Abstract.*—Eight species of the genus *Ommatius* Wiedemann are reported from Hispaniola in the Caribbean Islands. Seven of the species are described as new (*O. haitiensis*, *O. nigellus*, *O. russelli*, *O. gwenae*, *O. stramineus*, *O. cinnamomeus*, *O. hispaniolae*), *O. vitreus* Bigot is redescribed, and illustrations and a key are included.

The genus *Ommatius* Wiedemann is apparently more widespread among islands in the Caribbean than previously reported. Although the genus is poorly represented in collections, nine species have been reported and most appear to be endemic to a single island or in island group (Martin and Papavero, 1970; Scarbrough, 1983). For example, 2 species are found in the Bahamas, 1 on Haiti, 4 on Jamaica, and 2 on Puerto Rico and the Virgin Islands. Of these, only *O. marginellus* (Fabricius), which is reported from Cuba southward to Brazil, appears to have a wide distributional overlap with the other species. As more specimens accumulate in collections from the islands and as taxonomic problems are resolved, so too should information on species variation and distribution become more defined. This paper, one of several that will appear on the Caribbean *Ommatius*, deals with the species found on Hispaniola (Haiti and the Dominican Republic).

Specimens for study were received on loan from the following institutions: Museum of Comparative Zoology (MCZ), Cambridge; American Museum of Natural History (AMNH), New York; United States National Museum (USNM), Smithsonian Institution, Washington, D.C.; Canadian National Collection (CNC), Ottawa, Canada; Institute of Jamaica (IJ), Kingston; and Hope Department of Entomology (OX), Oxford University, Oxford, England.

The characters used in this study are well-known, traditional ones and are identified by reference to Figures 1-3. I followed the nomenclature used by McAlpine (1981). Unless otherwise stated, the paragraphs entitled "male" and "female" refer to the description of a specimen as a holotype or an allotype. Those entitled "variation" include only major characters of specimens in the type series that differ significantly from those of the type specimen(s).

KEY TO THE SPECIES OF *Ommatius* FROM HISPANIOLA

- |   |   |
|---|---|
| 1. Upper postocular bristles long, strongly proclinate and extending far forward above eye (Fig. 1) ..... | 2 |
| - Upper postocular bristles short, curved forward slightly only near their apices (Fig. 4) .....          | 5 |
| 2. Femora wholly black .....  | 3 |
| - Femora with some reddish to yellowish coloration at bases .....   | 4 |

- 3. Facial bristles wholly black; 2 or 3 strong marginal scutellar bristles, 1 or 2 anepimeral bristles ..... *O. haitiensis*, new species
- Facial bristles black and pale yellow; scutellar and anepimeral bristles absent ..... *O. nigellus*, new species
- 4. Most or all femoral bases with a small reddish spot or narrow band; epandrium slender, somewhat narrowed apically (Fig. 11) ..... *O. russelli*, new species
- All femora reddish to orangish on basal fourth or more; epandrium broad basally, abruptly narrowed apically (Fig. 9) ..... *O. gwenae*, new species
- 5. Meso- and metafemora wholly black or dark brown ..... 6
- Meso- and metafemora yellowish to orangish on basal third or more ..... 7
- 6. Facial bristles wholly pale (white or yellow), costal margin with slight bulge in males; abdominal pollen yellow; epandrium with single, broad apical process (Fig. 13) ..... *O. stramineus*, new species
- Several dark facial bristles above mystax; abdominal pollen yellowish gray; costal bulge absent; epandrium with two, slender, apical processes (Fig. 5); female with apical corners of tergite 9 projecting posteriorly (Fig. 6) ..... *O. vitreus* Bigot
- 7. Large species (20 mm); fore femur with apical third black; abdomen not noticeably enlarged apically; sternite 8 with a moderately deep median apical notch and 2 lateral protuberances (Fig. 14) ..... *O. cinnamomeus*, new species
- Small species (11-14 mm); fore femur entirely black or nearly so; abdomen somewhat enlarged apically; epandrium slender along its entire length (Fig. 7); sternite 8 without a deep median apical notch, lateral protuberances widely spaced (Fig. 8) ..... *O. hispaniolae*, new species

**Ommatius haitiensis, new species**

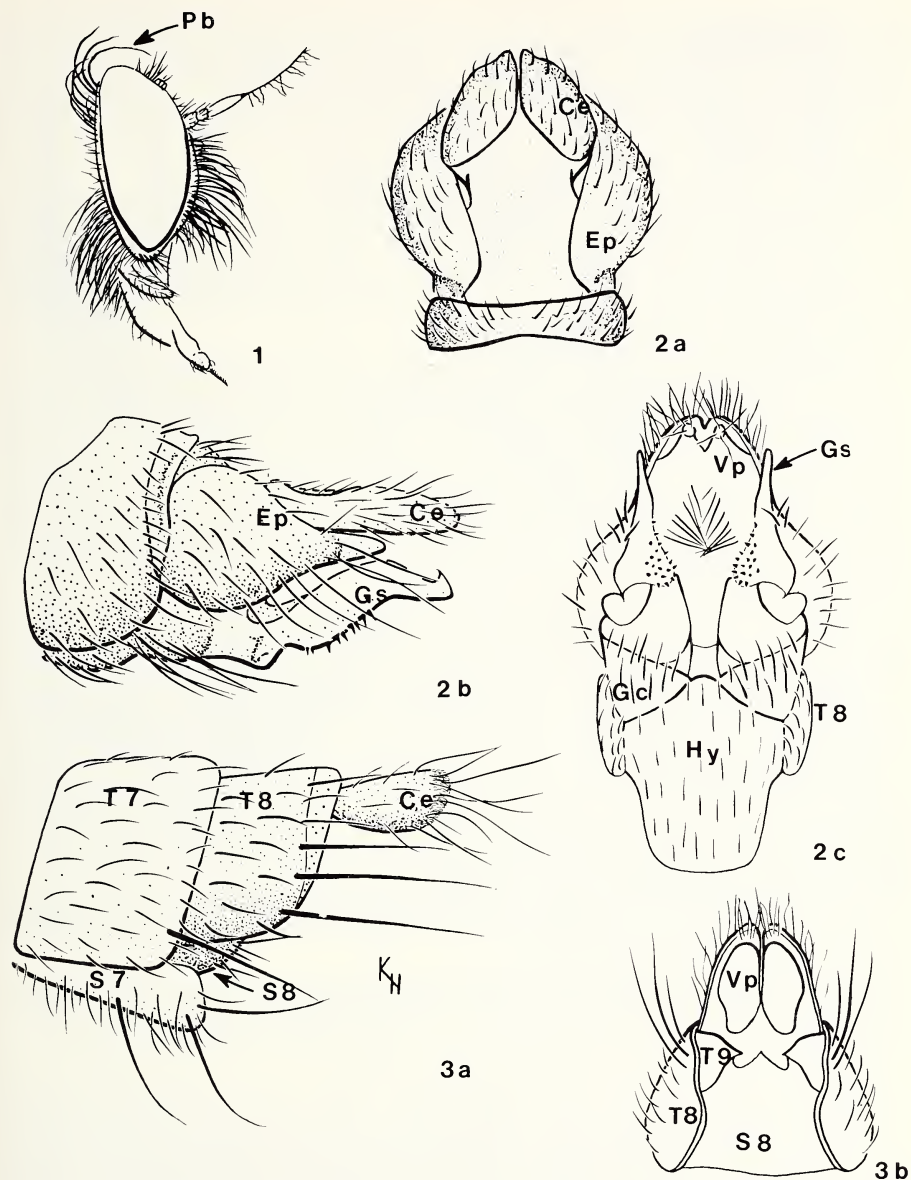
Figs. 1-3

*Description.* MALE (Fig. 1): 13.5 mm. Head black; face and occiput gray tomentose with traces of yellow along eye margin; tomentum of front generally brown, coppery brown at some angles. Bristles and hairs of face, front, antenna and upper half of occiput black, lower half (except 5-6 hairs below eyes) and base of proboscis with long white pile; facial pile and bristles long and slender, 4 stout black bristles on lower half, pile dense above and almost reaching base of antenna; several stiff ocellar hairs. Occipital bristles thin, straight on sides, strongly proclinate near vertex and long (ca. 3-4 times longer than those on sides), extending forward over eyes. Third antennal segment three times longer than width and as long as first two segments combined; style about one-third longer than the 3 segments combined.

Thorax black. Thoracic dorsum generally brownish pollinose; sides, grooves, pre-scutellum and scutellum of scutum and pleura with yellowish gray to yellowish brown pollen. Chaetotaxy of scutum black and abundant; hairs short anteriorly, much longer and stronger posteriorly; bristles consist of 2 notopleurals, 2-3 supra-alars, 2 postalars and a row of strong dorsocentrals which extend entire length of dorsum; scutellum with abundant, slender, black vestiture covering entire dorsal surface and 2 strong marginal bristles. Pleural pile abundant, long, strongest and primarily black on meta-episternum and laterotergite, sparse on anepimeron; meron bare. Row of pleural bristles almost entirely black, 1-2 pale; 1-2 black anepimeron bristles.

Wing hyaline. Veins brown, lighter basally; costal margin without a bulge; crossvein r-m at apical third of discal cell. Halter brownish, knob darkest.

Legs black. Coxae with pale yellowish gray pollen and mostly whitish bristly hairs,



Figs. 1-3. *Ommatius haitiensis*, head and terminalia. 1. Head, lateral view; Po = postocular bristles. 2. Male terminalia, dorsal (a), lateral (b) and apical (c) views. 3. Female terminalia, lateral (a) view and sternite 8 (b). Ce = cercus, Ep = epandrium, Gs = gonostylus, Gc = gonocoxite, Hy = hypandrium, Vp = ventral plates, T = tergites, S = sternites.

a few black hairs on fore and middle coxae. Femora moderately swollen and covered with appressed yellowish or whitish pile, dense dorsally and posteriorly, shorter and black apically; abundant, long, bristly hair below and apically (4–6), stronger hairs and setigerous bristles black except for a few whitish ones basally on middle and posteroventrally on fore femora. Tibiae with pale pile and long black bristly hairs and bristles. Tarsi black with black bristles.

Abdomen dark brown to black, apical borders of segments brownish. Traces of brownish pollen dorsally on most tergites, yellowish gray or gray pollen on sides and on sternites; tergites 7–8 somewhat shiny. Long whitish pile on sternites and sides of tergites, abundant and longest on first 5 segments. Abdominal bristles and appressed setae black, noticeably long and strong on tergites 1 and 7–8; tergite 2 with a midlateral patch of long black, bristly hairs.

Terminalia (Figs. 2a–c) brownish with cercus and gonostylus orangish brown. Cercus with pale weak hairs apically and stronger blackish ones laterally; black bristly hairs elsewhere on terminalia; hairs longest near apex of epandrium and base of gonocoxite. Gonostylus elongate with a flat preapical dorsal process and numerous short, thick black setae and long hairs basally. Epandrium dark and somewhat inflated basally, lighter and tapered apically. Hypandrium with rounded median point and scattered black hairs. Ventral plates below cercus with pale hair apically and stronger black bristly hairs basally.

**FEMALE** (Figs. 3a, b): 13.3 mm. The female differs from the male holotype as follows: darker yellowish gray facial tomentum; scutellum with some pale pile in addition to black pile. Femora slender, hind femur with pale yellow hairs and bristles ventrally in addition to black. Abdomen slightly lighter brown than male, pollen more yellow on sides of tergites; bristles and hairs of segments 1–6 pale yellow to yellow; segment 7 with several long black hairs along apical margin. Tergite 9 hidden by tergite 8, each apical corner wrapped around base of cercus, covering apical corner of sternite below. Sternite 8 shiny black with several transverse wrinkles and a few fine hairs basally; sternite paler apically with a sharp median pointed process. Cercus shiny and with abundant fine yellowish pile.

*Holotype*. ♂, Haiti, LaViste and Vie LaSalle Range, 5,000–7,000 ft., 16–23 Sept. 1934 (M. Bates). Allotype ♀ and paratype ♂, same data as holotype. The type specimens are deposited in the MCZ collection.

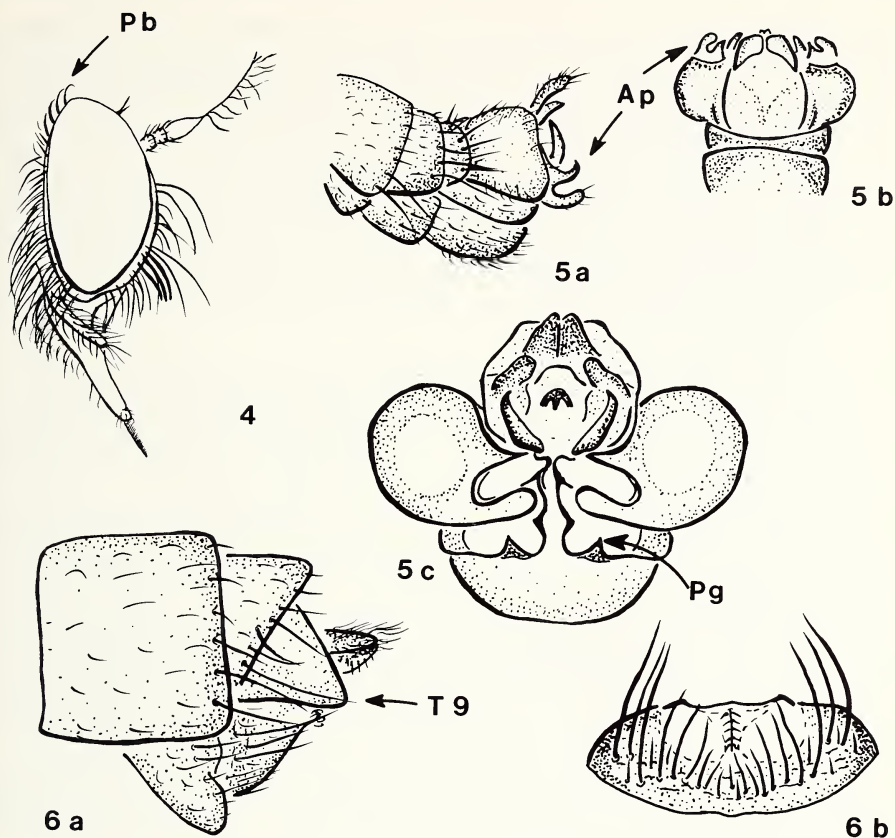
*Variation*. The paratype male (14.1 mm) differs from the holotype in that it has a lighter (dark brown) ground color and fewer black bristles and hairs.

*Etymology*. The species is named for the country from which the species was collected.

*Diagnosis*. This species is easily recognized by a black body and abundant black vestiture; third antennal segment 3 times longer than wide, facial hairs wholly black and abundant near base of antenna, several long black proclinate postocular bristles, 5–6 black hairs below eyes; 2 strong scutellar bristles, 1–2 anepimeral bristles, a patch of long black pile on tergite 2; male with epandrium abruptly tapered apically and an elongated gonostylus with a preapical dorsal process; female with a sharp median pointed process on the apical margin of sternite 8.

*Ommatius haitiensis* is quite different from other Caribbean species. It resembles *O. nigellus*, n. sp. which is also black but has black and light facial vestiture. *Ommatius haitiensis* differs from the latter species by the presence of wholly black facial





Figs. 4–6. *Ommatius vitreus* Bigot, head and terminalia. 4. Head, lateral view. 5. Male terminalia, lateral (a), dorsal (b) and apical (c) views. 6. Female terminalia, lateral view (a) and sternite 8 (b). Pg = process of gonocoxite, Ap = apical process of epandrium.

vestiture, black hairs below the eyes and on the upper half of the occiput, 2 marginal scutellar and 1–2 anepimeral bristles.

*Ommatius vitreus* Bigot

Figs. 4–6

*Ommatius vitreus* Bigot, 1875:246; type locality Haiti, ♀.

*Ommatius marginellus*: Hull, 1962:435; listed *O. vitreus* as a synonym *O. marginellus* (Fabricius).

*Ommatius vitreus*: Martin and Papavero, 1970:60; removed from synonymy.

Although Bigot (1875) indicated the existence of a female specimen in his description of *O. vitreus*, he neither designated a holotype nor indicated the number of specimens in his possession. A female and a male of *O. vitreus* from Bigot's collection presently exist in the Hope Entomological Museum, Oxford, England. Both specimens

bear a label with the specimen number (#779 in coll. Bigot) and a type number (either 283½ or 283 2/2). In order to clarify the confusion in this matter, I have selected the best preserved specimen of these, a female with the type label #283½, as *Lectotype*. The specimen is partially greased and lacks only the third antennal segment and style. A description of the lectotype and the male follows.

*Description.* FEMALE (Figs. 4, 6a, b): 12.0 mm. Head brownish black; face yellowish tomentose, front brown to yellowish brown. Mystax yellowish, 7 brownish hairs above; 2 long brown ocellar bristles. Occiput somewhat whitish pollinose, pile white with postocular bristles dark. Antenna brown with short dark bristles on segment 1 and 2; third segment with 1 or 2 short dorsal hairs, longer than wide, slightly less than length of first and second combined; style less than twice length of all segments combined.

Thorax with sparse pale pile, pile most abundant on prothorax, humeral callus, disc of scutellum and on sides of scutum above wings. Chaetotaxy: 2 notopleurals, 1 supra-alar, 1 postalar, 4 dorsocentrals in prescutellar region; scutellar bristles absent or at least not noticeably different from pile; row of pelural bristles yellowish. Thoracic pollen mostly yellow to yellowish gray, brownish on postalar callus.

Legs. Coxae brown with yellowish gray pollen, pale bristles and pile. Femora blackish brown, tibiae yellowish with brown apically; fore and middle tibiae with narrow apical dark bands, hind tibia dark on apical half; tarsi brown with basal tarsomere lightest, that of hind tarsus darkest. Pile of legs light yellow or whitish, sparse posteriorly on fore and middle femora; some black pile dorsoapically on fore and middle femora. Femoral bristles mostly pale yellow or whitish; fore femur with black bristles and bristly hairs below and 2 short black hairs apically. Middle femur with several strong bristles below on basal half, all light but 1; 4 additional black bristles on anterior surface and 1 short black posteroapical bristle. Hind femur with 1 black bristle dorsoapically. Tibiae with appressed black setulae; tibial and tarsal bristles black except for 1-2 on fore and middle tibiae and 2 on fore tarsus; middle tibia with a ventral row of black hairs.

Wing hyaline, veins brown, lightest basally. Costal margin straight anteriorly, r-m crossvein beyond middle of discal cell. Halter yellowish brown.

Abdomen dark brown to black, posterior borders somewhat lighter in color. Gray to yellowish gray pollen and pale pile on sides of tergites and on sternites. Tergites 8 and 9 shiny black with long black hairs, apical corners of 9 extending some distance posteriorly; cercus slightly lighter in color than tergites and with light pile; sternite 8 covered with meconium.

MALE (Figs. 5a-c): 11.0 mm, differing from female as follows: dark bristles of fore tibia only at apex, dark hairs of middle tibia absent. Wing with light brown in anterior cells, r-m crossvein at or beyond middle of discal cell. Halter brownish. Abdominal tergite 7 and 8 somewhat shiny with long, dark setae along apical margin, slightly longer on sides.

Terminalia mostly dark brown. Hypandrium somewhat inflated, apically rounded. Epandrium with basal two-thirds dark brown, greatly swollen and with dark setae; base somewhat flat in apical view; apical third with two lighter colored, slender, curved processes. Gonostylus somewhat oval in cross-section, yellowish brown. Cercus brownish with fine pale pile; ventral plates with basolateral processes.

*Lectotype*. ♀, #779, in coll. Bigot abt. 1845-93, Type 283½, Oxford Entomological Museum.

*Other specimens examined*. HAITI: ♂, #283 2/2, same data as lectotype; ♂, Furcy, July 25, 1950 (A. Curtiss); 2♂♂, 2♀♀, Kenscoff (nr. Port-au-Prince), 4,000-6,000 ft., August 8, 1934 (M. Bates); 2♀♀, Furcy, 4,000 ft., 10 Dec. 1956 (B. & B. Valentine). DOMINICAN REPUBLIC: ♀, Constanze, 3,000-4,000 ft., August 1938 (Darlington); 3♀♀, Sarabacoa, Nov. (?) 1950 (N. L. H. Drauss); ♂, Constanze, 5 May 1959 (M. W. Anderson and T. H. Farr); ♀, La Palma, 1.2 km E. El Rio, 2-13 June 1969 (Flint and Gomez). Specimens are deposited in the Oxford Entomological Museum, USNM, MCZ, AMNH, Ohio State University Museum (Columbus) and the collection of the author.

The lectotype and the male in Bigot's collection were examined.

*Distribution*. Hispaniola and Mona Island, Puerto Rico.

*Variation*. Only slight differences were noted in the series examined; ♂ 13.0-13.2 mm, ♀ 11.9-14.0 mm. The femora are invariable darker (black) and the facial tomentum is more white or gray than on the lectotype. The pleural and abdominal pollinosity is sometimes slightly darker yellow than the lectotype. The dark apical bands on the fore and middle tibiae are often absent or nearly so. In females, sternite 8 has abundant pale pile, a V-shaped row of stiff mostly black bristles and transverse wrinkles which are often covered with sparse yellowish pollen; the apical third has a low median ridge or line, a somewhat circular lighter colored (sometimes covered with pollen or bare and shiny) depression to each side of the ridge, and 2 low, laterally spaced, protuberances on the apical margin; middle of apical margin, with lateral protuberances, sometimes noticeably projecting.

*Diagnosis*. *Ommatius vitreus* is recognized by the wholly black femur, presence of two ventral rows of whitish setigerous bristles on the hind femur, mystax light with several dark hairs above, white to grayish facial tomentum, and an apically bifurcated epandrium in males and the absence of a costal bulge and marginal scutellar bristles.

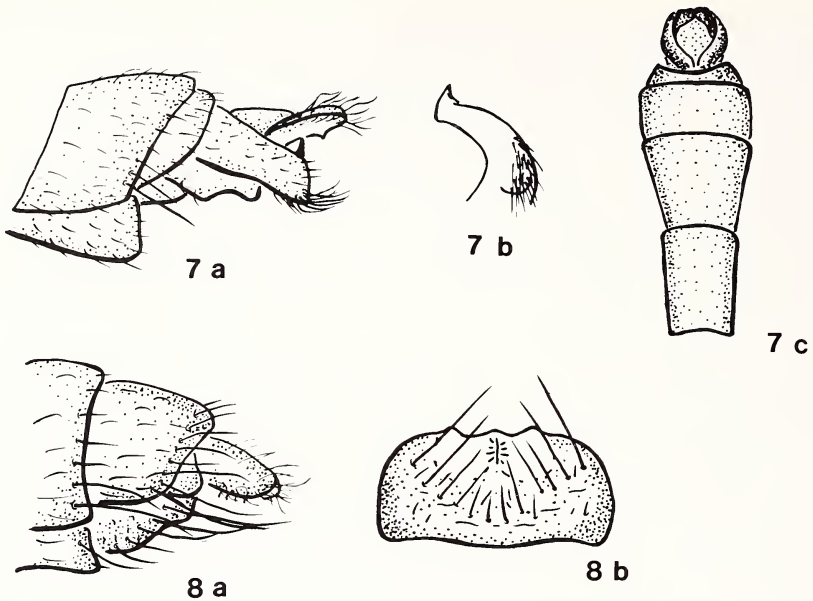
*Ommatius vitreus* will key to *O. alexanderi* Farr in Farr's key (1965) but can be recognized from that species by its wholly dark femora, apically bifurcated epandrium and the absence of a costal bulge and a styliform gonostylus.

### ***Ommatius hispaniolae*, new species**

Figs. 7, 8

*Description*. MALE (Figs. 7a-c): 11.1 mm. Head brown. Tomentum of face pale yellowish white, yellow along eye margin. Front grayish or brownish gray tomentose with 6 short, fine hairs and 2 long black ocellar bristles. Facial vestiture white with 4 stout bristles and longer bristly hairs. Occipital vestiture whitish, tomentum with traces of yellow; postocular bristles straight or slightly curved near tips. Antenna segments of equal length, style about twice length of all segments combined; segments 1 and 2 whitish tomentose, third segment somewhat oval, length slightly greater than width and with 1 or 2 short hairs dorsally. Antennal bristles short, generally whitish on segment 1 and brown on 2.

Thorax dark brown. Pollen of scutum and pleuron pale yellowish gray to gray. Pile absent on scutum except on humeral callus and above wing base. Black scutal bristles



Figs. 7, 8. *Ommatius hispaniolae*, terminalia. 7. Male, lateral (a) view, gonostylus (b) and dorsal (c) view. 8. Female, lateral (a) view and sternite 8 (b).

consisting of 2 notopleurals, 1 supra-alars, 1 postalar and 6 slender dorsocentrals in prescutellar region; several short hairs anteriorly. Scutellum with fine whitish pile, none along margin conspicuously different from that on disc. Pleural pile whitish and sparse or absent. Row of whitish pleural bristles above hind coxa.

Wing hyaline with slight costal bulge. Veins brown, light basally; crossvein r-m before basal half of discal cell. Halter yellowish, knob brownish yellow.

Legs. Coxae brown with gray pollen and several whitish bristles and long pile. Femora slender, dark brown or blackish, with basal third to fourth of middle and hind femora yellow; fore femur slightly lighter brown with some yellow at extreme base. Tibiae predominately yellow, apex of fore tibia narrowly brown banded, apical fourth of midtibia and apical third to half of hind tibia brown. Tarsi primarily brown with basal segments yellow to yellowish brown. Leg segments with appressed yellowish pile, sparse on fore femur, some black pile at femoral apices; tibiae with short dark setulae. Femoral bristles and hairs yellowish to yellowish white except as follows: all femora with 2 short apical hairs; middle femur with 6 black bristles; hind femur with 5-6 setigerous black bristles in ventroposterior row. Tibial and tarsal bristles black except for 4 yellowish ones on fore tibia, 2 on middle tibia and 3 on fore tarsus.

Abdomen brown, apical margins of segments lighter. Segments 3 and 4 moderately constricted with segment 5 expanded somewhat abruptly. Sides of tergites 1-6 and all sternites with pale brownish white pollen, brown elsewhere; brown setae on darker areas of tergites, yellowish white on lighter areas with 1 slightly longer hair at apical



corners of tergites 3–7; pile whitish, most abundant on basal five segments. Tergite 1 with 3 pale bristles.

Terminalia brown with weak pale pile. Epandrium slender, slightly wider basally; apical margin somewhat oblique with ventral margin longer and abundant long pile. Gonocoxite with 3 rather flat triangular processes, 2 below and 1 above. Gonostylus somewhat flattened and slightly curved forward. Hypandrium with apical margin sharply sloped toward middle. Cercus narrow with pale pile; ventral plates below cercus fused, forming a broad M-shaped process.

**FEMALE** (Figs. 8a, b): 12.0 mm. The female differs from the holotype as follows: tomentum and pollen of body with more yellow than male. Proclinate postocular bristles black. Leg bristles primarily orangish yellow; black bristles in ventral row of hind femur absent; 3 or 4 pale fore tarsal bristles. Crossvein r-m beyond middle of discal cell; costal bulge absent. Halter brownish yellow. Segment 8 somewhat shiny with abundant pale pile and a few hairs. Tergite 9 with only lateral corners exposed, corners only slightly projecting posteriorly. Sternite 8 with transverse wrinkles, a V-shaped row of pale bristles and a low mid-line ridge on apical third; a shiny depression on each side of ridge; apical margin with 2 lateral, slightly projecting, protuberances. Abdomen lacking constriction near middle.

**Holotype**. ♂, Barahona, Dominican Republic, September 1938 (Darlington). **Allotype**: ♀, Port-au-Prince and vic., Haiti, March 18, 1934 (N. Bates). **Paratypes**: ♀, Dessources, Haiti, alt. 100 ft., March 2, 1922, F. 4639 (Collector ?); ♀, Diquini., Haiti, date ? (W. M. Mann); 3♂♂, 4♀♀, Bois Caradeux, Port-au-Prince, Haiti, September 7–10, 1936 (E. M. Ducas), ♀, Barahona Prov., Dominican Republic, July 13, 1967 (L. H. Rolston).

The holotype and allotype are housed at MCZ; and the paratypes at AMNH, USNM, CNC, and the collection of the author.

**Variation**. Minor differences among the paratypes are as follows: lengths ♂ 12.1–15.1 mm. ♀ 11.0–13.5 mm; one male with pale yellow or orange facial bristles, and two black bristles in the anteroventral row of hind femur. Two females with white tomentose faces. Apical margin of epandrium sometimes more rounded than on the types.

**Etymology**. This species is named for the island from which the insect was collected.

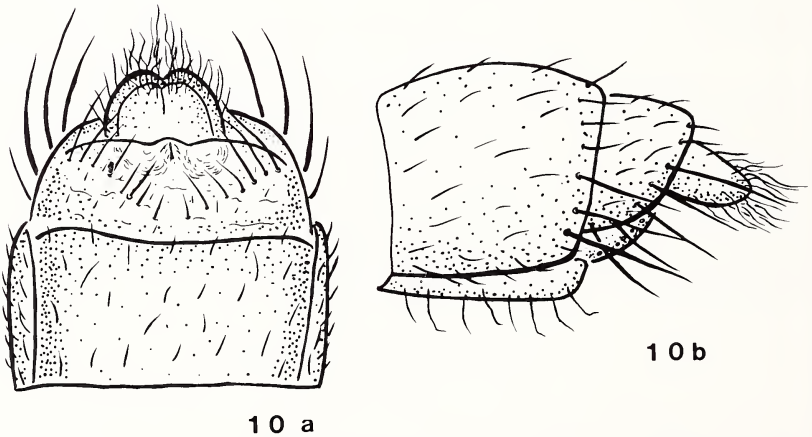
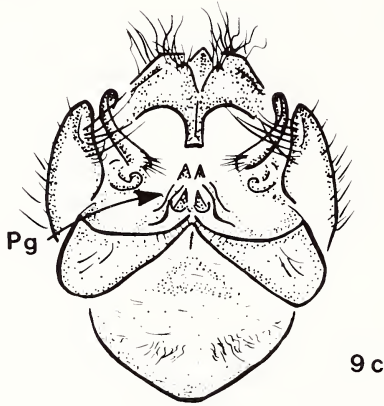
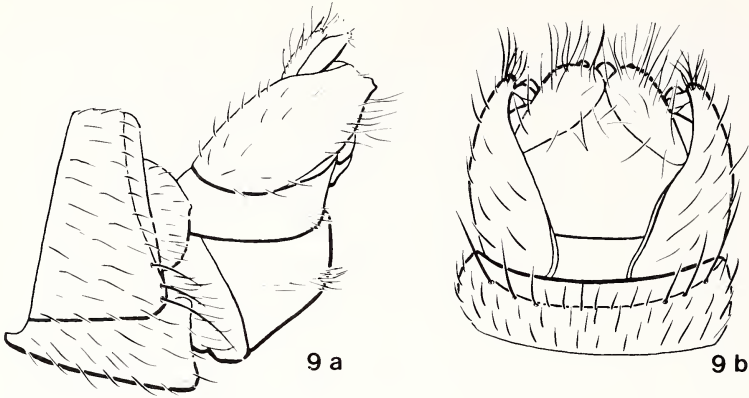
**Diagnosis**. *Ommatius hispaniolae* is easily recognized by its dark brown fore femur and an absence of marginal scutellar bristles; the slender epandrium, the slight bulge in the costal margin of the wing and the spatulate abdomen of the male.

This species will run to *O. jamaicensis* Farr in Farr's key (1965), but can be separated from it by the virtual absence of orange-brown on the femora, pale to dark brown tibiae and a sickle-shaped dististylus. Males of *O. hispaniolae* also have a slender epandrium and a slightly spatulate abdomen.

### ***Ommatius gwenae*, new species**

Figs. 9, 10

**Description**. **MALE** (Figs. 9a–c): 17.0 mm. Head dark brownish black. Face grayish yellow tomentose, front yellow to brownish yellow. Mystax whitish with several long, brown hairs above mystax; 4 brown ocellar bristles, 2 noticeably long. Occipital tomentum whitish, pile white; postocular bristles black and proclinate, inner 3 or 4



Figs. 9, 10. *Ommatius gwenae*, terminalia. 9. Male, lateral (a), dorsal (b) and apical (c) views. 10. Female, lateral (a) and ventral (b) views.

long, curved above eyes. Antennal segments 1 and 2 with black hair, third with 2 short hairs dorsally and length twice its width; style slightly less than twice length of all segments combined.

Thorax dark brown to black with some brown pollen. Scutum with mostly grayish or whitish pollen on sides, prescutellar region, scutellum and pleuron; pale pile abundant on prothorax, humeral callus and on anepisternum; pleural pile sparse or absent elsewhere. Scutal bristles black as follows: 2 notopleural, 1 supra-alar, 1 postalar and 8 rather stout prescutellar dorsocentrals; numerous weaker bristly hairs in prescutellar region, on side above wing and on postalar callus; several short dorsocentrals anteriorly. Scutellum with long pale pile and bristly hairs, none on margin conspicuously different in length or thickness. Vertical row of pleural bristles pale and long. Halter reddish brown.

Legs. Coxae black with gray pollen and whitish bristles and pile. Femora, hind tibia and tarsi primarily black; basal tarsomeres of fore and middle tarsi brown. Femoral bases reddish yellow on basal third to half; fore and middle tibiae with narrow apical dark bands and yellow above; hind tibia dark on apical half; reddish yellow to reddish brown above. Legs with mostly yellowish to whitish pile, some black pile on dark areas of femora and 1–2 short, black, bristly apical hairs. Fore and middle femora with anterior bristles black and yellowish bristles below; 1 black or pale preapical posterior bristle on middle femur. Hind femur with 4 whitish bristles anteriorly; setigerous bristles in ventral rows primarily black with 1–3 pale yellow apically. Fore and middle tibiae with only 1–2 black bristles beyond those at apex, others yellowish. Hind tibial and fore tarsal bristles mostly black except for 1 or 2 yellowish bristly hairs and 4 pale yellow bristles, respectively.

Wing hyaline with veins dark brown apically, lighter basally; costal margin thick, bulging greatly; anterior cells with ripples and slight brownish tint; r-m crossvein before middle of discal cell.

Abdomen dark brown to black, with margins of most segments somewhat lighter. Pollen primarily grayish to whitish with traces of brown on sternites 7–9. Pile pale, longer and more abundant on basal segments. Tergite 1 with two pale bristly hairs; segments 6–8 with black setae, longest along apical margins and corners.

Terminalia mostly black with abundant pale yellowish pile and hairs; some black hairs on basal half of epandrium. Epandrium with length twice basal width, slightly tapered on apical third, apical margin somewhat truncate. Hypandrium with numerous transverse wrinkles, its apical margin tapered abruptly before middle, forming an arched point; the latter preceded by a shallow transverse depression and a dense row of fine black hairs on each side of middle. Gonocoxite with a shallow groove leading to 2 tapered processes on each side of middle and a lateral flange. Gonostylus reddish, gently arched forward, apex slightly curved laterally. Plates below cercus fused, forming an M-shaped structure, the middle narrowly elongate and apically truncate.

FEMALE (Figs. 9a, b): 17.0 mm. Slight differences include: facial tomentum slightly darker yellow than male, pollen behind humeral callus golden in some light, yellowish brown on sides of scutum. Femora less swollen than male; middle femur with several fine black bristly hairs anteroventrally; hind femur with ventral rows of setigerous bristles mostly pale, only 1–3 black. Fore and middle tibiae with several bristly black hairs below. Wing without costal bulge; r-m crossvein beyond middle of discal cell.

Tergite 8 somewhat shiny with black setae, longer along apical margins and apices. Tergite 9 concealed by 8 above and wrapped around base of cercus. Sternite 8 with yellow gray pollen basally, white setae and long hairs (the latter in a V-shaped pattern); basal half with transverse wrinkles; apical half with a light colored, low mid-line ridge narrowed to a point in apical margin; apical margin without usual lateral protuberances, a shiny depression to each side of ridge.

*Variation.* Minor variations in the paratypes (♂, ♀) included; lengths 16.0 mm; female with a few brown hairs above mystax; male front with fine brown hairs along eye margin; 3 or 4 short pale or black bristles on posterodorsal surface of middle femur; hind femur with posterior row of ventral bristles all black, 1 black bristle on anterior surface. All tibiae with appressed black setulae.

*Holotype.* ♂, Dominican Republic, Constanza, 1–10 June 1969 (Flint and Gomez). *Allotype:* ♀, same data as holotype. *Paratypes:* ♂, Dominican Republic, La Toma, N. of San Cristobal, 9–10 June 1969 (Flint and Gomez); ♂, Santa Domingo, Dominican Republic, date ?, Williston Collection.

The holotype and allotype are in the USNM and the paratypes in the AMNH and the collection of the author.

*Etymology.* *Ommatius gwenae* is named in honor of my daughter, who developed an interest in insects at an early age.

*Diagnosis.* *Ommatius gwenae* is recognized by a dark body; facial vestiture mostly whitish with 6–7 brown hairs above mystax; inner postocular bristles black and strongly proclinate; femora and hind tibia mostly black with basal third to half reddish brown; scutellum with mostly pale pile, a conspicuous pair of scutellar bristles absent. Males with a prominent costal bulge, apical margin of epandrium somewhat truncate, a patch of fine black pile on the hypandrium, an M-shaped ventral plate and two acutely tapered gonocoxal processes.

*Ommatius gwenae* is most similar to *O. russelli*, n. sp. but can be quickly recognized by the characters described in the key and those discussed at the end of the section on *O. russelli*, n. sp.

### ***Ommatius russelli*, new species**

Fig. 11

*Description.* MALE (Figs. 11a, b): 16.0 mm. Dark brown to black. Tomentum of face, front and first antennal segment yellow to brownish yellow; occiput grayish yellow tomentose. Mystax yellowish white; 6–8 brown hairs and several pale shorter ones above mystax. Hairs of antenna, front and ocellar tubercle brown to black; 2 long ocellar bristles and several smaller ones. Upper postocular bristles dark, inner 2 or 3 on each side of vertex strongly proclinate; remaining postocular bristles slightly curved or straight, shorter and pale yellowish white. First antennal segment longer than either second or third segment, third longer than wide and with 3 inconspicuous dorsal hairs; style almost twice length of all segments combined.

Thorax with mostly brownish pollen above, yellow to brownish yellow behind humeral callus; yellowish to grayish yellow pollinosity in grooves, on sides, in pre-scutellar region, on scutellum and on pleuron. Scutal bristles black (2 notopleural, 1 supra-alar, 1 postalar and 8–9 posterior dorsocentrals); black bristly hairs and pile on sides and in prescutellar region, short anteriorly, longer posteriorly. Scutellum with black bristly hair becoming longer toward posterior margin, 3 hairs on margin



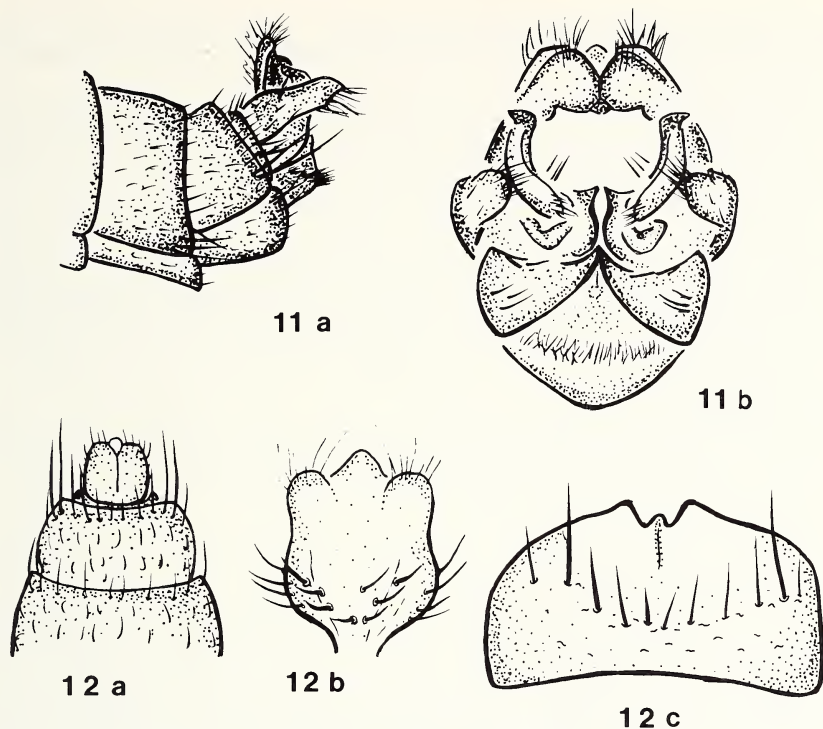


Fig. 11. *Ommatius russelli*, male terminalia; lateral (a) and apical (b) views.

Fig. 12. *Ommatius nigellus*, female terminalia; dorsal view (a), ventral plates (b) and sternite 8 (c).

slightly longer than those on disc but otherwise not noticeably different. Pronotal and pleural pile pale. Row of pleural bristles yellowish white. Halter reddish brown.

Legs. Coxae black with grayish yellow pollen and pale yellowish white bristles and pile. Most or all femora primarily black with a narrow reddish basal ring or a small reddish basal spot; tibiae yellow to reddish yellow except for dark apical third of hind tibia and narrow dark apical ring on remaining tibiae. Tarsi dark brown with basal tarsomeres slightly lighter. Legs with mostly yellowish short pile, some black pile in dark areas; tibiae with black setulae. Black bristles on anterior surfaces of fore (1) and middle femora (5); yellowish bristles and hairs below. Middle femora with 1 brownish yellow preapical bristle and 2–3 shorter dorsoposterior bristles. Hind femur with yellowish or brownish bristles except for 3 or 4 black ones in posterior ventral row; several slender pale hairs dorsally on basal half of hind femur. Bristles of tibiae and tarsi black except for 3–4 on fore tarsus, 5 on fore tibia and 3 on middle tibia. Fore and middle tibiae with a row of fine black hairs below.

Wing hyaline; costal margin thick, bulging greatly; anterior cells brownish especially along margin of veins; r-m crossvein slightly beyond middle of discal cell.

Abdomen brownish black, margins of several segments slightly lighter. Abdominal

pollen brown to yellowish gray; pale brown to brown short setae on dark areas of tergites and long slender hairs in apices of tergites 7 and 8; pile and remaining bristles pale yellow.

Terminalia mostly black with gonopods and apex of epandrium reddish; hair and pile of basal half black, that of cercus and ventroapical margin of epandrium abundant and pale. Epandrium length more than twice basal width, slightly swollen basally and tapered apically to a point with a slight constriction before the apex. Hypandrium with a dense, transverse tuft of black pile, apical margin forming a narrow, slightly arched point at middle and a shallow transverse depression posteriorly. Gonocoxite with a shallow basal groove leading to middle and connecting to a flat arched flange. Gonostylus curved sharply outward on apical third, apex somewhat blunt. Plates below cercus fused at middle forming a broad M-shaped structure, the middle short, broad with apex truncate.

Female unknown.

*Holotype*. ♂, Dominican Republic, La Palma, 12 km E. of El Rio, 1–13 June 1969 (Flint and Gomez). Paratype ♂, same data. The types are stored in the USNM.

*Variation*. The paratype male differs as follows: 18.0 mm, 3 postalar bristles, 4–5 bristly dorsocentrals on each side, fore femur wholly black.

*Etymology*. *Ommatius russelli* is named after my son, who accompanied me on numerous collecting trips.

*Diagnosis*. *Ommatius russelli* is recognized by a dark body, facial vestiture primarily yellowish white with 6–8 brown hairs above mystax; inner postocular bristles black and strongly proclinate; femora almost wholly black with only a narrow basal reddish ring or spot; scutellum with abundant black bristly pile. Males with prominent costal bulge, epandrium tapered to point, hypandrium with a complete row of fine black pile and an M-shaped ventral plate.

*Ommatius russelli* is most similar to *O. gwenae*, n. sp. but differs from that species by its almost wholly black femora, wholly black scutellar pile, a complete transverse row of black pile on the hypandrium, a slender epandrium whose length is at least twice or more than its widest width, and the absence of acute spine-like gonocoxal process.

### ***Ommatius nigellus*, new species**

Fig. 12

*Description*. FEMALE (Figs. 12a–c): 15 mm. Integument black. Tomentum of face and occiput yellowish, that of front brownish. Hairs of lower half of mystax yellowish; upper half with 3 strong, short black bristles, 5 or 6 longer black hairs and abundant shorter black hairs. Hairs and bristles of antenna and front black; 9 ocellar hairs, 2 slightly longer than others. Postocular bristles black, 6 or 7 on each side of vertex proclinate with inner 2–3 strongly so; a few weaker black hairs immediately behind proclinate bristles with remaining occipital hairs white. Third antennal segment length twice its width, slightly longer than basal segment, and with 2 short dorsal hairs; style slightly more than twice length of the 3 segments combined.

Thorax dark brown to black. Pollen of scutum mostly brown; yellowish white to yellowish brown in grooves and on sides; yellowish white behind, on scutellum and pleuron. Scutal bristles and hairs black, weak pile primarily black, some pale; 2

notopleural, 1 supra-alar, and 1 postalar bristles; abundant bristly hairs above wings and between dorsocentrals; dorsocentrals extend full length of scutum, shorter anteriorly, stronger and more abundant posteriorly. Scutellum with abundant black slender hairs, somewhat shorter and weaker basally, becoming gradually longer and slightly thicker posteriorly on margin; marginal hairs not obviously different from those on disc. Pleural pile mostly pale, scattered in thin patches or absent; some weak bristly black pile on an- and katepisternum. Row of pleural bristles black on upper half and pale yellow or whitish on lower half. Halter reddish brown.

Legs black. Coxae with yellowish white pollen, and yellowish bristles and hairs. Femora and tibiae with primarily yellowish hairs and setae, bristles mostly black; femora with 1–2 short apical bristly black hairs and some black apical setae; fore femur with 1 short black bristle on basal fourth; middle femur with 4–5 black bristles on basal half; 4 additional black ones on anterior face, and 1 posteroapical setigerous black bristle. Hind femur with 1 black bristle on anterior face and most bristles on anteroventral row black. Tibiae and tarsi with black bristly hairs and bristles except for 1 yellowish one on fore tibia and tarsus and 2–3 on middle tibia.

Wing hyaline; veins dark brown, lighter basally; r-m crossvein beyond middle of discal cell.

Abdomen black, apical borders of most segments brownish. Tergites with whitish or yellowish white pollen on lateral margins and on sternites. Dark areas of tergites with traces of brownish pollen and short setae; pale yellowish setae and hairs on sides of tergites and sternite. Sides of tergites 1 and 2 with abundant pale hairs, tergite 1 with 2 black bristles. Tergite 8 shiny black with long black bristly hairs. Sternite 8 greatly arched upward on apical half and with V-shaped pattern of long black bristles; apical margins with 2 apical protuberances and a median notch, an arched ridge on apical third with shiny lateral depressions. Cercus with abundant pale pile and a few scattered short bristly black hairs dorsally and apically. Ventral plates below cercus with a short lateral lobe and several short spine-like bristles.

Male unknown.

*Holotype*. ♀, Haiti, Furcy, July 25, 1950 (A. Curtiss). The holotype is stored in the AMNH.

*Etymology*. *Ommatius nigellus* is named for its uniform black body.

*Diagnosis*. *Ommatius nigellus* is recognized by its black body, yellowish and black vestiture of the face and legs, several strongly proclinate postocular bristles, a row of black and white pleural bristles and abundant black scutellar hairs. This species is similar to *O. haitiensis*, n. sp. but can be separated from it by the presence of yellowish hairs in the lower half of the face, absence of anepimeral and strong marginal scutellar bristles and the presence of a row of pleural bristles of which the upper half is black and the lower half pale.

### ***Ommatius stramineus*, new species**

Fig. 13

*Description*. MALE (Figs. 13a, b): 13.0 mm. Integument brown. Tomentum of head bright yellow, yellowish brown at some light angles. Bristles and hairs of face yellow, those of antennal segments, front, ocellar and postoculars brown, remaining

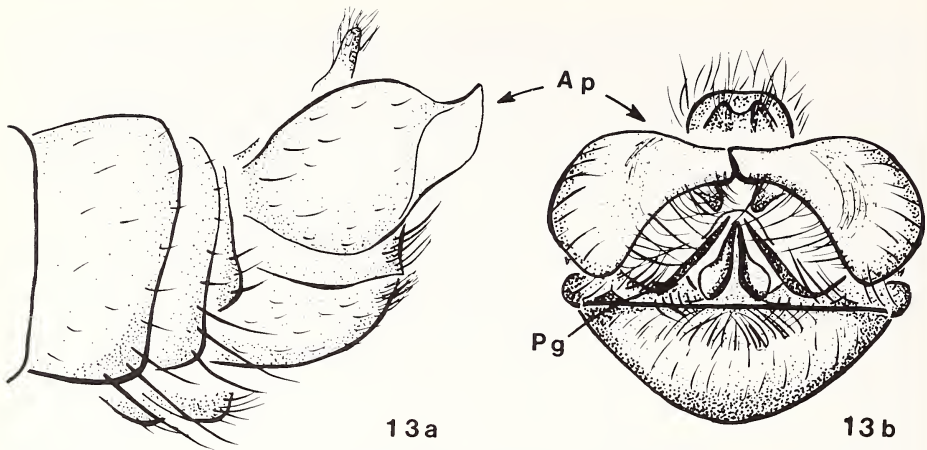


Fig. 13. *Ommatius stramineus*, male terminalia; lateral (a) and ventral (b) views.

occipital vestiture yellowish; two long ocellar bristles and several (7) shorter ones. First and third antennal segments about equal lengths and about one-third longer than second; third segment length twice its width and with 1 or 2 dorsal inconspicuous bristles; style almost twice length of the 3 segments combined.

Thorax dark brown, scutum with brownish pollen, yellow to light brownish yellow pollen in grooves, on sides, behind, on scutellum and pleura. Scutal bristles dark brown to black with 2 notopleurals, 1 supra-alar, 1 postalar and 4-5 weak yellowish posterior dorsocentrals on each side. Thoracic pile weak and pale, most abundant on prothorax, humeral callus and on anepisternum; few scattered hairs between dorsocentrals and on pleura, meron bare. Scutellum with sparse, weak and yellowish pile, bristles absent along margin. Row of yellowish bristly hairs above hind coxa. Halter brownish yellow.

Legs. Coxae brown with light yellow tomentum, yellowish bristles and hairs. Femora, tarsi and apical third of hind tibia brown, a lighter narrow apical brown band on anterior 4 tibiae. Legs with weak yellowish hairs and setae, some black on femoral apices and black setulae on tibiae. One or 2 short black bristly hairs apically on femora. Femoral bristles yellowish except black as follows: middle femur with 5 anteriorly and 1 posteriorly; hind femur with 3-4 anteriorly and all but 2 or 3 black in both ventral rows. Tibial and tarsal bristles primarily black, only 2 or 3 yellow bristles on anterior 4 tibiae and 4 on fore tarsus.

Wing hyaline. Veins brown, dark apically, lighter basally; costa slightly bulging, anterior cells rippled and with a brownish tint, especially along veins in bulge; r-m crossvein before middle of discal cell.

Abdomen yellowish brown, apical borders yellowish. Pollen yellow, abundant on basal 4 segments and traces of brown above. Hairs and setae primarily yellow, some brown on dorsum of last 3 tergites; hairs long and thin on basal segments with 2-3 bristly hairs on apical corners of tergites 5-8 and 2 yellow stiff bristles on tergite 1.

Terminalia yellowish brown to dark brown; hairs and bristles yellow. Epandrium



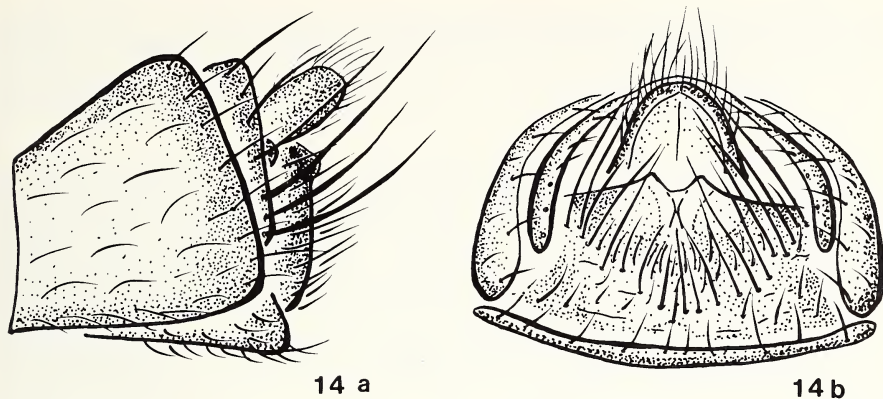


Fig. 14. *Ommatius cinnamomeus*, female terminalia; lateral (a) and ventral (b) views.

dark brown, greatly inflated on basal three-fourths; apical fourth thin, yellowish brown, strongly narrowed below, slightly truncate apically. Hypandrium dark brown, apical margin straight or nearly so. Gonocoxal with short stiff bristly hair basally and two slender projections, basally separated, apically converging. Gonostylus slightly curved, slender, somewhat flattened laterally. Ventral plates below cercus fused, forming a large single plate with two apical swollen ridges, the apex bearing yellow pile.

Female unknown.

*Holotype*. ♂, Haiti, Mt. Bouretta, 5,000 ft., 15 September 1934 (M. Bates). Paratype: ♂, Dominican Republic, Constanze, 3,000–4,000 ft. (Darlington). The holotype is stored in the USNM and the paratype in the MCZ.

*Variation*. The male paratype is identical to the holotype except as follows: length 14.0 mm; the body is darker, especially the femora, tarsi and abdomen; the proclinate bristles are yellow, and additional black bristles are on the hind femur; the apical margin of the epandrium is somewhat truncate.

*Etymology*. This species is named for the pale straw-colored tomentum of the face.

*Diagnosis*. *Ommatius stramineus* is easily recognized by its yellow facial tomentum and vestiture, femora wholly brown, deep yellow pollinose abdomen, a slight bulge in the costal margin, an epandrium with the apical margin somewhat truncate and an absence of marginal scutellar bristles. This species is somewhat similar to *O. vitreus* but differs from that species by a stronger body, a slight bulge in the costal margin and the absence of an apically bifurcated epandrium.

#### *Ommatius cinnamomeus*, new species

Fig. 14

*Description*. FEMALE (Figs. 14a, b): 20.0 mm. Head brown to black. Tomentum of face pale yellow, front yellowish brown, occiput pale yellowish to pale brownish gray; 2 long ocellar and 6 proclinate postocular bristles black, remaining occipital

hairs pale yellow. Facial bristles and hairs pale yellow. Antennal basal segment slightly longer than second or third; third segment length slightly more than twice width; antennal bristles dark to pale brown, third segment with two short inconspicuous bristles dorsally; style length about one and one-half times that of all segments combined.

Thorax dark brown. Dorsum with bright brown pollen, deep yellowish brown behind humeral callus, lighter in grooves, on sides of and behind the scutum; pollen of scutellum brownish, that of pleuron brownish to yellowish gray. Scutal bristles black as follows: 2 notopleurals, 1 supra-alar, 1 postalar; 4 bristly dorsocentrals posteriorly and several short weaker ones anteriorly. Several dark bristly hairs on side above wing. Pale thoracic pile abundant on prothorax and humeral callus, less abundant and sparse elsewhere. Scutellum with long pale pile, none on margin as conspicuous pair. Row of pleural bristles whitish yellow. Halter brown with stalk lightest.

Legs. Coxae brown with yellowish gray pollen and pale yellowish bristles and hairs. Femora and tibiae mostly yellowish to brownish yellow; anterior legs lightest, dark brown as follows: apical third to half of femora; a narrow apical dark band on fore and middle tibiae and apical fourth to third on hind tibia. Tarsi dark brown to black except basal tarsomeres slightly lighter. Pile and setae of legs mostly pale yellow with 1-2 black bristly apical hairs and black dorsoapical setae on femora, black setulae on tibiae, fore tibia with a ventral row of long thin black hairs; femora with bristles pale yellowish to orangish except as follows: middle femur with 5 black bristles anteriorly, and 1 posterodorsal bristle; hind femur with 1 or 2 setigerous black, apical bristles in each ventral row. Tibial and tarsal bristles black except for 1-3 yellowish ones on fore and middle tibiae and fore tarsus.

Wing hyaline with a slight brownish tint, costal cell darker in part; costal margin without bulge; r-m crossvein beyond middle of discal cell.

Abdomen dark brown with margins of segments lighter. Segments with yellowish brown to brown pollen, sternites and sides of posterior 3 or 4 tergites somewhat lighter. Dark brown setae on dark areas of tergites; thin pale hairs on lighter pollinose areas, longest on basal 3 or 4 segments; bristles on basal segments yellowish. Apical margins of tergites 7-8 with several black bristly hairs or bristles. Most of tergite 8 and all of 9 hidden from above by preceding tergites. Cercus with yellowish pubescence, a few weak and bristly brown and yellowish hairs along margins. Sternite 8 with yellowish pubescence and a V-shaped pattern of black bristles; the apical margin with a notch and lateral protuberances; a strong elevated ridge (in lateral view) and a shallow, shiny depression on each side.

Male unknown.

*Holotype*. ♀, Haiti, NE foothills, La Hotte, 200-400 ft., October 10-24, 1934 (Darlington). The holotype is in the USNM.

*Etymology*. This species is named for the brown pollen on the thoracic dorsum.

*Diagnosis*. *Ommatius cinnamomeus* is easily recognized by its large size, pale yellow facial tomentum and hairs, brown scutal pollen and bristles, brownish tint of the wing surface, legs mostly yellowish to yellowish brown and the absence of marginal scutellar bristles. This species runs to *O. tibialis* in Curran's key (1928) but differs from that species in its larger robust body, more extensive yellow ground color of the fore femur, the presence of only brown hairs on sternite 8 and the absence of

pale or yellowish scutal bristles. Females of *O. tibialis* typically have the anterior surface of the fore femur black, occipital and pleural pollen white or gray and hair of sternite 8 white or yellowish.

#### ACKNOWLEDGMENTS

I thank the following for the loan of specimens used in this study: Norman Woodley, Museum of Comparative Zoology, Cambridge, Mass.; Pedro Wygodzinsky, American Museum of Natural History, New York; Lloyd Knutson and Raymond Gagne, Systematic Entomology Laboratory, USDA, Washington, D.C.; Charles A. Triplehorn, Department of Entomology, Ohio State University Museum, Columbus; Leif Lyneborg, Museum of Zoology, Copenhagen, Denmark; Thomas Farr, Institute of Jamaica, Kingston; M. C. Birch, Hope Entomological Museum, Oxford, England; D. M. Wood, Biosystematic Research Institute, Agriculture Canada, Ottawa, Canada. Thanks are also due to the staff of the Diptera section in the Systematic Entomology Laboratory, USDA, at the U.S. National Museum who so kindly assisted me with numerous suggestions during this study; to L. Knutson, USDA, ARS, Systematic Entomology Laboratory, Beltsville, Md. for reviewing and making helpful suggestions on an early draft of the manuscript; to the Towson State University Faculty Research Committee for support of this study; and to Keith Harris for preparing Figures 2, 3 and 9. The remaining figures were prepared by the author.

#### LITERATURE CITED

- Bigot, J. M. F. 1875. Dipteres nouveaux ou peu connus. 4e partie V. Asilides exotiques nouveaux. Ann. Soc. Entomol. France (5)5:237-248.
- Curran, C. H. 1928. New species of *Ommatius* from America, with key (Asilidae: Diptera). Amer. Mus. Nov. 327:1-6.
- Farr, T. H. 1965. The robber-flies of Jamaica (Diptera: Asilidae). Pt. 2. Bull. Inst. Jamaica Sci. Ser. 13:5-36.
- Hull, F. R. 1962. Robberflies of the world: the genera of the family Asilidae. Bull. U.S. Nat. Mus. Pt. 2 224:443-446.
- Martin, C. H. and N. Papavero. 1970. Family Asilidae. In: A catalogue of the Diptera of the Americas South of the United States. Mus. Zool. Univ. São Paulo (35b):1-139.
- McAlpine, J. F. 1981. Morphology and terminology—adults. In Biosystematic Research Institute (eds.), Manual of Nearctic Diptera. Agriculture Canada, Research Branch, Ottawa. Monograph 27, Vol. 1:9-63.
- Scarborough, A. G. 1983. A new species of *Ommatius* Wiedemann from San Salvador, the Bahamas. Proc. Entomol. Soc. Wash. 85:144-151.

Received June 29, 1983; accepted November 22, 1983.